MULTIMEDIA UNIVERSITY®

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 3, 2018/2019

HPT2021 INTRODUCTION TO HUMAN PATHOLOGY

(All Sections / Groups)

31 MAY 2019
9.00 a.m. - 11.00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 4 pages including cover page with **FIVE** questions only.
2. Attempt **ALL** the questions. All questions carry equal marks and the distribution of the marks for each question is given.
3. Please write all your answers in the Answer Booklet provided.

QUESTION 1

(a) What do the following prefixes / suffixes mean? [3 marks]

i. Pneumo-
ii. Myelo-
iii. Nephro-
iv. Gastro-
v. Hemat-
vi. Histo-
vii. –oma
viii. –oid
ix. –itis
x. –pathy
xi. –stasis
xii. –gnosis

(b) What is reversible and irreversible cell injury? [1 mark]

(c) In response to altered physiologic or injurious stimuli, cells undergo adaptation or transformation. Distinguish the terms: metaplasia, hyperplasia, dysplasia and neoplasia. Indicate if each of the conditions is reversible or irreversible. [4 marks]

(d) Apoptosis plays an essential role in the development and maintenance of all mammalian tissues. The apoptotic program ensures that damaged, aged, or excess cells are removed in a regulated manner that is not harmful to the host. Beyond the cell intrinsic apoptotic program, an integral second step in apoptosis is the removal of the cell corpse. Which cells perform the removal of apoptotic cells? What happens if the removal is deficient? [2 marks]

QUESTION 2

(a) What are the three main processes that occur in acute inflammatory response? [3 marks]

(b) How does hypoproteinemia cause edema? [2 marks]

(c) What is a granulating wound? [1 mark]

(d) Name FOUR signs of wound healing. [2 marks]

(e) List FOUR causes of wound dehiscence. [2 marks]

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QUESTION 3

(a) What is smog? Briefly explain TWO types of smog. [3 marks]

(b) Vitamins are considered essential nutrients because either your body cannot make them or they are made in inadequate amounts to prevent negative health consequences or diseases.

i. Give FOUR causes of hypovitaminosis D. [2 marks]

ii. What diseases can be caused by hypovitaminosis D in children and adult? [1 mark]

(c) Traveller's thrombosis, or economy-class syndrome, can lead to fatal complications.

i. How does it occur? [1 mark]

ii. Name FOUR groups of individuals who could be at high risk for the said syndrome. [2 marks]

iii. If you belong to the high-risk group for this syndrome and you are having a long-haul flight in schedule, what would you do to reduce your chance of developing the syndrome? Name at least TWO ways. [1 mark]

QUESTION 4

(a) What are cytogenetic disorders? Name TWO techniques that can be used to diagnose the disorders. [2 marks]

(b) A pair of identical twin brothers has been raised in different foster families since they were born. One of them was diagnosed with lung cancer at his age of 45. In your opinion, will the other brother face the same medical condition around the same age as well? Why? [3 marks]

(c) Explain briefly FIVE types of alterations that promote tumor development. [5 marks]

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QUESTION 5

(a) How does innate immunity protect us from disease? [2 marks]

(b) What is the main function of the adaptive immune system? [1 mark]

(c) Is vaccination an example of innate or adaptive immunity? Explain your answer. [2 marks]

(d) What could cause the immune system of a body to attack its own cells? [2 marks]

(e) How do microbes avoid host immune responses? Give TWO ways. [2 marks]

(f) List TWO mechanisms how microbes spread from surface through tissues and body. [1 mark]

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